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UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF AGRICULTURAL ECONOMICS

Contributors

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ALFRED STEFFERUD will be remembered as the editor who brought this magazine to maturity. After serving overseas with OWI he has returned to the USDA to revive and reconstitute its Yearbooks.

JOHN D. BLACK is well known to our readers as professor of economics at Harvard University. LOIS OLSON was an economic geographer in the USDA before she disappeared in OSS for overseas duty—she is back in Washington now. Other reviewers this time are all in BAE—WILLARD W. COCHRANE, agricultural economist, JAMES G. MADDOX, economic analyst in Office of the Chief, CARL P. HEISIG, the new Head of the Division of Farm Management and Costs, and MARSHALL HARRIS, specialist in land tenure studies.

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Give It Back TO THE Indians?

By WALTER V. WOEHLKE. *The Red Men have parted with fifty million acres in the Great Plains since 1890. This author shows what has been done with this land and some of the consequences to both white men and red. He concludes with the question that in shortened form has now become the title of the article.*

THE TITLE, tenure, and use of the lands remaining in conditioned Indian ownership within the continental United States present a baffling series of intertwined legal, political, social, economic, anthropological, and psychological problems. I won't polish these facets here, but I might timidly suggest to the interested reader that he glance at two recent books, *The Hopi Way,* by Laura Thompson and associates reviewed in the fall of 1945 issue of Land Policy Review, and *Handbook of Federal Indian Laws,* by Felix S. Cohen. These volumes, a few out of many, illustrate vividly the legal, psychological, and administrative difficulties and complexities arising out of the witches' broth of Indian land history, tenure, and use.

An illuminating map of the continental United States in handsome colors is found in the latest edition of the Handbook. It shows how the Federal Government, by a series of purchases, treaties, and agreements, most of them chipped and broken, extinguished Indian rights to the bulk of the lands west and north of the Ohio, containing roughly about a billion acres. Settling of the West was a painful process—painful to both the Indians and the frontiersmen. But with certain exceptions the executive and judicial arms of the Federal Government tried hard to make the process as bloodless, painless, and inexpensive as the circumstances warranted. The manner in which the Indian nations were cleared out of the 13 original States and pushed across the Ohio and Mississippi, leaving a few red islands in the white-and-black sea, the manner in which the "Indian country" west

of the Mississippi was conquered for white settlement, which all but engulfed the western red tribes, makes fascinating reading, especially when read against the lurid background of the World War II mass migrations, but the details of the process itself do not concern us here. Our inquiry is focused on the results of the process of dispossessing the Indians and the effect of these results on the national agricultural economy.

In the 40 years between 1890 and 1930 the hunger for plow land caused our enterprising farmers and speculators to take too big a bite out of the lands that remained in Indian ownership at the beginning of the period. The biggest bite was taken out of the Indian lands in the two Dakotas, in Montana east of the Rockies, in Oklahoma, Kansas, and Nebraska—all within the Great Plains area, the soil of which in the early 1930's took wing and resettled as far east as the Atlantic Ocean. In these States the Indian tribes in 1890 owned a little less than 67 million acres. By 1930 almost 50 million acres had passed out of Indian hands.

In 1890 the Great Plains Indian tribes, on the lands they held in common, were beginning to operate large herds of cattle and horses. They were adapting themselves to the livestock business; most of their farming was for subsistence. They had neither the inclination, the experience, the capital, the credit, nor the equipment to engage in commercial grain farming. And the bulk of the land remaining in their hands, after the very extensive amputations of the 70's and the 80's, was grazing land containing some of the finest range upon which millions of buffalo had grown fat. They did not want to part with any more of their remaining lands.

Gone to Others

But the lands went. Reservation after reservation was broken up by act of Congress. The individual Indians were allotted tracts of various sizes; that which was not needed for the then living Indians was declared surplus, was ceded or sold to the United States, opened to entry and sale, and disposed of to the plowman. Much of the best land allotted to individual Indians in severalty, though title was held by the United States in trust for the owners, changed hands when the silver dollars clinked and wound up in white possession.

The "plow that broke the plains" got busy on the ex-Indian land. Also on much of the land remaining in individual Indian ownership. The Indian still lacked capital, credit, experience, and equipment for commercial farming. So he leased his land to white operators for periods limited by law to a maximum of 5 years, contributing more than his share to the tenancy problem.

What would have happened if the wishes of the Indian tribes had been heeded and their reservations had not been broken up entirely? Suppose they had been allowed to keep—in the Dakotas, in Montana east of the Divide, and in Oklahoma—a total of 40 million acres instead of the 17 million acres they still have. It is safe to assume that the Indians would *not* have plowed the bulk of their land, that they would gradually have developed their livestock business. This is not

a wild assumption. On the 2,000,000 tribal acres of the Pine Ridge Reservation in South Dakota more than 40,000 Indian cattle plus 10,000 horses grazed in 1910. By 1934 the tribal lands on the reservation had been broken up in thousands of relatively small individual tracts, each of them too small for an economic ranch unit. The number of Indian-owned cattle had diminished to 3,800 head and the 8,000 Oglala Sioux, without cattle, without crops, without income, were hungry. Actually hungry.

Consequence

All of the Indian reservations in the Dakotas and eastern Montana felt the fury of the drought with grasshopper accompaniment during the dry years of the 1930's. Many thousands of white farmers abandoned their holdings and moved west, but the Indians stayed. It was the home of their ancestors. These ancestors and the buffalo had survived many a dry cycle because the sod always survived and protected the soil. Isn't it possible that, if the Great Plains Indians had been left in possession of the bulk of their 1890 reservations and the plow had been largely kept out, the drought calamity and the dust storms would have been much less severe—and the weight of the smaller wheat surplus in the late 1920's would have exercised far less strain on the national economy?

The application of the 160-acre homestead law to the public lands west of the 97th meridian—nearly all of them acquired from Indian tribes—was the principal lever that pried open the lid of the Pandora's box from which emerged the submarginal land troubles, the dust storms and the distress of the 30's—troubles and distress almost forgotten after 4 years of rain, ample crops, and high war prices.

But the Indians remember.

Realization

They have realized that the transit and chain that partitioned their range lands, the plow that broke the sod on the too-small allotments, the silver dollars that induced them to part with cattle and land, led directly and i n e x o r a b l y to the hunger-and-drought decade. The realization of the causes of their distress, temporarily ameliorated by war-created and nonagricultural sources of income, had induced the red men to look critically at the system of land tenure and land use forced on them by the dominant race. What they have seen has caused many of them to favor remedial measures.

Let us take a closer look at the course of events on the Pine Ridge Reservation in South Dakota, scene of the Wounded Knee massacre late in December 1891, when more than 200 Indian men, women, and children were killed by United States soldiers. In 1900, Major Brennan became superintendent of the 2,000,000 acre reservation. Realizing that the Oglala Sioux were less than 20 years from the end of the buffalo economy, he fostered the production of cattle and horses. His records show that the Sioux had 40,000 head of cattle and 20,000 horses in 1910. Livestock was produced on tribal land used free principally for subsistence. After the last buffalo had been killed in the 80's, the Sioux were kept alive through the issue of rations. But by 1914 rations were

merely for the benefit of the old and indigent; their livestock kept the tribesmen in health and vigor.

Step by Step

That year World War I was started. In 1915 the pressure of war prices led to the sale of increasing numbers of Indian cattle, including she-stuff. Special agents got busy allotting the tribal land in severalty to individuals. Major Brennan left early in 1917. He had kept the entire reservation for Indian livestock. The new superintendent opened the reservation, encouraged the Sioux to sell their remaining cattle, and to lease their allotments to white operators. Within a year, by the spring of 1918, practically the entire Indian range was leased to outsiders. The Indians had a brief period of cash prosperity; they lived on the proceeds of the sale of their cattle and on their rentals.

The rentals were small. At 10 cents an acre, a family owning 1,000 acres could not splurge heavily on $100 a year. When the cattle money was gone, other capital assets had to be sold. In the war and postwar years the Interior Department permitted the alienation of ever-increasing numbers of Indian trust lands, selling inherited tracts and dividing the proceeds among the heirs, granting patents-in-fee, removing the restrictions against alienation, and issuing certificates of competency.

Between 1914 and 1922 never less than two thousand tracts were sold each year. In one year more than 11 thousand tracts were sold and they contained nearly 1½ million acres.

In contrast, in 1934 only 256 tracts of Indian trust lands, containing 35,781 acres, were removed from the trust status and their alienation made possible. This number has never been reached in any one of the succeeding 10 years.

At Pine Ridge, full advantage was taken of the "liberal" policy allowing the sale of Indian lands. Several thousand parcels of the best land were sold, plowed, and planted to wheat, flax, and corn by the white settlers. The Indian vendors consumed the proceeds, usually paid in annual instalments. When these proceeds ceased, the Indians, now often without cattle, horses, and land, appealed to the Government for relief. So did the settlers when the depression and the drought hit them simultaneously.

Another Close-up

The disastrous effect of taking too large a bite out of Indian lands—disastrous to white settlers as well as the Indians—is shown by the history of the Cheyenne River Reservation, one of the eight Sioux reservations in the Dakotas. These reservations were carved out of the much larger territory acknowledged as the country of the Sioux Nation by the treaty of 1868. The Cheyenne River Reservation was established by act of Congress in 1889. It comprised 2,804,090 acres. With an average annual precipitation of less than 17 inches, farming was precarious and the use of the land for grazing was indicated.

Nineteen years after its establishment, the best part of the reservation was ceded by the Sioux owners to the United States. In 1908 ap-

proximately 1,185,000 acres were opened to entry and sale, the Indian owners receiving all and perhaps more than the land was intrinsically worth. Settlers, railroads, and the plows came onto the reservation. Big ranches, little farms, three counties, and two county seats were established. School districts were organized and trading centers were built to serve the new population.

By 1940 the 3 counties within the reservation boundaries had a total population of 9,470, of which 3,800 were Indian and 5,670 white. The white families owned about 40 percent of the land, and they leased and used more than 600,000 Indian acres. In 1939, 941 non-Indian families owned livestock worth $1,157,000; the livestock of 540 Indian families was worth $311,000. That year the total value of all farm products, sold, traded, or consumed by the 1,135 farm families of the 3 counties, white and Indian, was $660,277, or less than $600 per family. Net income was, of course, considerably lower. Hence Federal subsidies through AAA payments, FSA loans and grants, WPA and CCC work-relief projects, had to supply crutches for the tottering economy of these and hundreds of other counties in the Great Plains.

Times to Come

Conditions have improved since 1939. High war prices and ample rains have almost trebled the value of their products for the white farm families. The Indian farm families have quadrupled the number of cattle they own and have increased the value of their products in almost the same ratio as their white neighbors. For the moment all is rosy on the banks of the Cheyenne River. But—

Agricultural prices and precipitation will not always remain at their present level. When the inevitable recessions come, the agricultural income of all the families will shrink, but the Indians will be in a better position to weather the storm. They have the range resources to expand their livestock operations to 50,000 animal units a year, almost four times the present number and enough to enable 660 Indian families to run an average of 75 head per family.

Reciprocal Loss

As the Indians expand their operations to the limit of the land resources they own, white operations must of necessity narrow down. This gives emphasis to the fact that the bite of 1,200,000 acres taken out of the Cheyenne River reservation's 2,800,000 acres was too large for the Indians' good, too small for the 5,670 non-Indians. The alienated land cannot under normal conditions support the white farm population at any reasonably decent standard of living; neither can the 1,600,000 Indian acres support their owners except on a substandard level. Under conditions as they prevailed in the 1930's, neither Indians nor non-Indians will be able to stand squarely on their own economic underpinnings. Red and white will not be able to pay the cost of public services. Because of delinquent taxes and defaulted mortgages hundreds of white farms will go into county, State, or bank ownership. But the Indians will escape this particular scourge. They do not pay

local land taxes and they cannot hock their trust lands. Uncle Sam is paying for the public services and is supplying credit facilities for them.

So viewing the Great Plains Indian land situation from a high hill, it appears that the oversize bite taken out of Indian holdings after 1890 not only hurt the Indians and their economy but that this big chunk also helped to bring on the national stomach ache which plagued American agriculture with its undigested surpluses clear to the beginning of World War II.

Should we give part of this big chunk back to the Indians? That question was answered affirmatively 11 years ago when the Federal Emergency Relief Administration initiated the purchase by the United States of nearly 10,000,000 submarginal acres for the special purpose of shooing the plow away and of putting the erodible soil back into grass. A small part of this submarginal acreage was earmarked for Indian use. All of this purchased land has remained in public ownership. It has been used in a way to correct the mistakes of the past, to restore the vegetative cover of palatable plants, to control accelerated erosion, to prevent further soil losses, and to build up economic units. During the war years there was heavy pressure to replow much of this and other Indian lands that are submarginal for crop production, just as there was constant demand to overstock Indian grazing lands. But with only a few exceptions, damage to the land was avoided.

The needs of the Indian and his record of land use are such that the return to him of large areas of land for grazing is indicated.

Riches

The wealth of a democracy lies in its people, not in its government or its goods. The product of democracy is self-acting men and women. The well-being and progress of society require that every citizen, of whatever age, may have the opportunity to discover himself and to make use of himself largely in his own way.

—Liberty Hyde Bailey

Russian Contributions to Soil Science

By CHARLES E. KELLOGG. *As modern soil science partly grew out of Russian studies and a Russian concept, the REVIEW has long wanted just this brief story of its beginnings and the influence of Russian scientists on its development in this country.*

THIS YEAR is the 100th anniversary of the birth of V. V. Dokuchaiev. Not many people in the world will pause to honor his memory, nor will many even recognize his name. But to a small group—at most a few hundred—he is known as the father of modern soil science.

The problems of our day are too pressing to allow us to spend much time in ancestor worship—time that might better be devoted to thinking through the maze of problems that lie ahead. What is needed is boldness of imagination—minds that seek new combinations of relationships more appropriate to our needs. Such was the mind of Dokuchaiev.

These minds see the present need *and* they grasp the experience of the past. They create new concepts woven from the strands of both time and distance—of both history and geography. Busy as we are, it is in the spirit of today's need to recall briefly how the influence of this Russian scientist and his students has meant so much to farmers everywhere. Science is international. Either this fact becomes an integral part of our basic attitudes toward the world, and we go forward to a much better life, or we destroy ourselves.

To begin, we shall need some account of early soil science. Although early man had knowledge of the responses of soils to management, few attempts were made to study soils as such, or to organize knowledge concerning them prior to the rise of modern science.

Perhaps soils were too common, too near at hand, and too close to labor in the field to interest early philosophers. Even so, the ancients (Pliny, for example) recognized that differences among the natural kinds of soils were more important to the yield and quality of crops than the usual differences in management. Yet soils were among the last of the important natural bodies to come under direct scientific observation.

Early scientists did study plants and plant nutrition, partly in response to the great pressure of an increasing population against the food supply. Speculations arising from these studies led to assumptions about the nature of soils. These were so incorrect that one marvels how long it was before someone undertook to examine the soils themselves.

For more than 50 years after the beginnings of chemistry in Europe, during the middle of the 18th century, the search continued for the

philosopher's stone and for some single "vital force" that makes plants grow. In turn, came the salt theory, the water theory, the fine earth theory, and the humus theory. Each was "proved" by experiments that were misinterpreted—misinterpreted because people were looking for a single cause of plant growth.

Balance Sheet Theory

Chemistry was developing rapidly with the beginning of the nineteenth century. Analyses of plants showed that their bulk was made up of carbon, oxygen, and hydrogen taken from air and water. But the importance of other elements, like nitrogen, potassium, calcium, and phosphorus, was appreciated. Yet for years, responsible chemists argued whether plants had to take in these elements as such or whether they had mystic power to synthesize them from others.

Justus von Liebig, the great German chemist, entered the field of agricultural chemistry around 1840. With calm scientific reasoning, based upon the newer knowledge of chemistry, and, where that failed, with sarcasm and invective, he swept away notions that plants fed on humus, or that they could change water into mineral nutrients. Thus, in a sense, modern European agricultural science began with Liebig. The break with alchemy was complete.

But it was largely a laboratory science, supplemented with small field plots laid out with little or no regard to what they represented. Applications to real soils in the field were disappointing to Liebig personally and to those who had been led to expect so much from the new science. He saw soils along the Danube becoming more productive, when by his calculations they should be nearly sterile. Yet the nature of actual soils in fields, gardens, and forests remained unknown, uninvestigated, and even unappreciated.

According to Liebig's reasoning, chemical analyses of plants and soils would provide a simple balance sheet as a guide to fertilizer practice. (And by "soil" he meant only the surface layers stirred in tillage.) What plants removed, the farmers must return.

This balance-sheet theory, with its enormous oversimplification of soil-plant relationships chiefly in terms of analytical chemistry, supported by Liebig's towering personality and by his faithful followers, lasted long years beyond its usefulness. Some geologists even aided the process of oversimplification. Was not soil simply weathered rock? Thus to Liebig's simple concept of soil as a storage bin was added the simple notion of filling the "bin" with pulverized granite, sandstone, or what not. Even today many people, including some soil chemists, grasp at the balance-sheet idea. Occasionally one hears yet of "sandstone" soils or that a soil is "like a bank."

This is not the place to go into all the details of why this simple concept is not even approximately true. Of course, chemical analyses of soils, when properly made of the various parts, are useful and necessary. And the nature of the parent rock is important. But not these things by themselves.

Questions Arose

Difficulties of harmonizing the balance-sheet or storage-bin concept of soils with experience increased

with the years. The discoveries of Pasteur and others led to a realization of the importance of microorganisms and reemphasized organic matter and the living portion of the soil. Then, too, explanations were lacking for the great differences in productivity among newly cultivated soils. Why should different crops respond so differently to the same fertilizer on adjoining plots? Or the same crops in different places? Why did crops low in potash often respond more to potash fertilizers than other crops rich in potash? And so on. These things couldn't be explained by the balance sheet. In fact, it was well nigh impossible to predict how one field would behave from experience with others. Farmers could only test new practices by trial and error.

In Russia

Western Europe is a region of small farms and gardens. On the whole, the soils are not highly productive by nature but are responsive to management, like those of eastern United States. In contrast, Russia is a great sprawling country, with many kinds of soil, some of which were potentially productive to begin with, like the great black lands (Chernozem).

The space of western Europe was well filled in the nineteenth century and increased production per acre was essential, even if the returns to labor were low. Russia had space. For the administration and settlement of this vast area, it was necessary to know what soils were in it. Such differences in problems likely accounted in part for the differences in soil study to meet the problems.

Dokuchaiev

A careful observer, traveling across the vast area of old Russia, could note the close relationship among vegetation, climate, and soils. Dokuchaiev was such an observer. Others, like Fallou and Richthofen, grasped at the concept of soil geography but failed to integrate it with the cycle of living organisms. Dokuchaiev regarded soils as the essential link between the inanimate mineral body of the earth and the biological kingdom, including man himself. Since there was no life without soil and no soil without life, he reasoned that they must have evolved together in a mineral-organic cycle; in fact in many cycles, because there were many unique combinations of soils and associations of living things.

Dokuchaiev was led to examine soils in the field. He found that the soil in each kind of landscape was made up of a unique series of layers, genetically related to one another and to the environment. They were not confined to the surface, but were developed to the depth of living roots. Collectively, these layers, or horizons, of a soil are called its profile. The soil profiles of different kinds of landscapes were strikingly different from one another; but in the same kind of landscapes, wherever found, they were alike.

New Concept

Thus a wholly new concept of soils arose: They are natural bodies, each with its own distinct morphology; they are dynamic, developing with the natural landscape; they accurately reflect, at any moment, the combined influence of the living matter and

climate, acting upon the parent rock as conditioned by the relief, over a period of time; and they are distributed over the earth according to orderly geographic principles. Within the soil itself are processes that resist change and maintain productivity.

Dokuchaiev opened a whole science to his students. With this concept, soil science, as we have it today, became possible. It is not simply a combination of other sciences, like chemistry, geology, and biology. Although techniques and principles of many other sciences are used, it has a large body of subject matter and principles that are peculiarly its own. It can be classified as a physical science, a biological science, or an earth science: it is all three.

Disciples

A vigorous school of disciples developed the new science. Much work was to be done. The morphology of the various kinds of soil had to be studied. The chemical, physical, and biological processes responsible for their development had to be worked out. Their distribution had to be shown on maps. For the first time there was a basis for planning such research and for classifying the results—for establishing scientific principles and making predictions.

After the death of Dokuchaiev (1903) the leadership fell to Sibirtsev. He was followed by K. D. Glinka, who died soon after his visit to the United States, in 1927, to attend the Congress of the International Society of Soil Science. Last year I visited the present staff in Moscow and their leader, L. Prasolov. These and many other distinguished Russian scientists have carried the work forward into all phases of soil science.

Partly because of the language barrier and perhaps more because of the very vastness of the new concepts, it was not until the publication of Glinka's textbook in German in 1914, and more especially until after World War I, that the Russian work became known in western Europe and America. Only a few references to it had appeared before.

Into America

Dr. C. F. Marbut, of the Department of Agriculture, read the German edition and immediately grasped its significance. He translated it into English, and circulated copies of the manuscript among American soil scientists even before publication. The influence was enormous. Several translations of other papers followed.

One of the most dramatic events of this period was the translation in the early twenties of the papers of the great Russian soil chemist, K. K. Gedroiz, of the same school. For several years soil chemists in both Europe and America had been studying the soil by the new methods of chemistry. Scores and scores of papers appeared, full of complicated tables giving the results of all sorts of empirical experiments with even more complicated and conflicting theories to explain them. Breaking into this confusion with a few simple papers, Gedroiz explained with easy scholarship the basic principles that made most of the previous papers useless and gave form and meaning to the others.

During the early nineteenth century workers in the United States listened attentively to the arguments over plant nutrition and soil

fertility that prevailed in Europe, but they took little active part. A few exceptions could be mentioned, notably the work of Edmund Ruffin, whose *Calcareous Manures* (1821–53) contained original ideas. But most of the ideas in the United States followed those in Europe. They were even less useful here. America also had a big space. Easy migration to new and better soils in the West eased the pressure on the leached and relatively infertile soils of the East. The balance-sheet theory did not supply many answers to the soil problems of that day—in fact the problems were neither defined nor answered, as the history of settlement in the West shows. People simply settled by trial and error.

During a long and useful scientific career extending from before the Civil War until after 1900, Hilgard, at Mississippi and California, studies soils in our South and West. Independently he developed ideas approaching those of Dokuchaiev. So did Vanderford in Tennessee (1897), and later Coffey in the Department of Agriculture. Significant success, based largely on the European ideas, was achieved locally by King in Wisconsin and especially by Hopkins in Illinois.

Soil Surveys

The Soil Survey was initiated as an integral part of the agricultural research program of the Department of Agriculture, by Milton Whitney in 1898. From that time soils were studied increasingly in the United States. The old theories were still taught in the classrooms, but every worker soon found for himself that they didn't hold. As facts piled up, special theories to explain them arose—little theories that could go only a short way before bogging down in contradiction.

Facts became increasingly plentiful—hard facts—but they didn't fall into patterns that made predictions much easier. What was needed was a new generalization—a new framework within which all these facts could be assembled, classified, and remembered, and through which principles could be developed.

New Framework

This the Russian school furnished. Under the intellectual leadership of Dr. Marbut and a few others the process of creating a new American soil science began. Fortunately much had been done.

Because the new concept was so much broader, and involved so much that had scarcely been investigated at all in America, some found difficulty in grasping it at first. This was especially true of those who had confined their researches to the laboratory and field plot—who had not examined different soils in the field to the depth of plant roots, nor seen the contrasts across a continent.

Many American agricultural scientists were trained primarily in chemistry and plant physiology in the German tradition of Liebig and had little experience in the earth sciences, especially geography. They often confused the current experimental methods of chemistry and biology with the scientific method, which is, of course, much broader. Scientific correlation may not involve "experiments" at all, in the ordinary sense.

Yet the change was made rapidly because the new principles were so much more useful.

International Science

The great contribution of the Russians has not been simply the creation of a Russian soil science; rather their ideas and data contributed toward an international soil science. Americans have made great contributions and so have scientists from many lands and races. The results of research and experience on a given soil type can be applied to the same kind of soil in Canada or China, in the United States or South Africa, or in the Soviet Union or Italy—in fact, wherever such soil is to be found.

Much remains to be done. Millions of acres of land need to be investigated. But the goal is becoming clear. It is possible for every farmer to have at his command the knowledge of the whole world about his particular type of soil—knowledge gained through scientific researches and from the experience of farmers everywhere on the same kind of soil. The disasters and heartaches of trial and error can be greatly reduced, if not eliminated. New practices can be adopted promptly.

Soil scientists have learned that through international collaboration the efforts of each country are made many times more useful. Dokuchaiev may have foreseen this result. I don't know.

The United States has a unique responsibility in the world program for peace, and for the building of an expanding world economy. One of the obligations that goes along with being the richest, most productive nation in the world is that we set the pace. In this country we have only about six percent of the world's people, but we produce somewhat more than half of the world's goods. We have more than half of the power, we turn out about sixty percent of the manufactures, and ours is the mightiest, the most productive agriculture. . . . Fortunate as we are in having a highly developed, integrated economy, we cannot expect to prosper indefinitely in a depressed world. . . . United States agriculture has certain definite broad assignments, against which we should measure all of our policies, plans, and action programs.

—Clinton P. Anderson

Our National Parks
Shift to Peacetime Operation

By ISABELLE F. STORY. *Good news of the land that will always be ours to enjoy is spread across these welcome pages.*

AS THE National Park Service prepares for what will probably be the largest travel year yet experienced, it looks back upon the most amazing four years in its history. When war broke on us, national park travel was spiraling upward. More than 21 million visitors had been recorded in the 1941 travel year, just about one visitor for every acre in the National Park System; and the number of tourists during the fall months indicated that 1942 would topple the '41 records.

Although of necessity park travel and development were hard hit as the Nation girded for total war, the 4 years following December 7, 1941, pointed up several interesting facts. The tenacity with which people who know the outdoors cling to their ideal of vacations in the national parks was shown by the 35,500,000 people who managed to visit them in the face of war work and travel discouragements and deterents. Best of all, the happenings of those war years proved that ownership and protection of the national parks by and for the people are woven deeply into the fabric of our national life.

Creation of national parks, monuments, historic sites, and allied areas in the National Park System established a new form of land use, one predicated upon the principle that the most scenic wilderness areas, the scientific exhibits of national interest, and the historic places connected with major events and great deeds in the march of human occupancy and progress in what is now the United States should be preserved "for the benefit and enjoyment of the people," to pick up a phrase from the act of Congress establishing the National Park Service. A glance at the record shows how successful this new venture in land use has been.

The history of "common" use of certain areas goes back to Colonial days, to the "great ponds" of Massachusetts preserved in the early 1600's. But the principle of national park establishment and use by the public is a distinct rung on the ladder of progress. The park idea as represented in Yellowstone National Park is a direct result of an exploration of that fabulous land in 1870 and of a suggestion made at the evening campfire as the party was preparing to return to civilization. And the suggestion? That the area must not be covered by private claims and exploited for personal gain; that its wonders belonged to the future as well as to the present, and to all the people, and should be preserved for the use

of all. So Yellowstone National Park was established in 1872, "as a pleasuring ground for the benefit and enjoyment of the people." The precedent in conservation thus set has since spread 'round the world.

In the ensuing three-quarters of a century the National Park System evolved until now it includes 169 areas, of great diversity of exhibit, size, and location, but bound together by the universality of their national significance.

Along with growth in the System and integration of ideals and ideas of management and use, came more and more visitors to the national park areas, to relax in the serenity of high mountains, to stand in awe before great canyons that have been millions of years in the cutting and before trees that were thriving long before the beginning of the Christian era, to be inspired by the aura of endeavor and striving and achievement in the face of almost insurmountable obstacles that hovers over the areas that mark our human progress.

Primary Responsibility

Then the bombshell of war hit the national parks. After the first stunned reaction, the Service became aware that it, as the trustee for some of the finest bits of our native America, was facing the most critical challenge in national park annals. As Director Drury aptly said back in 1940, "Most of the people who visit the parks, whether they realize it or not or whether they put it into words, are impelled to visit them because of the quest for a supreme experience." To perform its traditional functions of preserving the parks that furnish this supreme experience still remained the primary responsibility of the Service.

Conversely, the Service knew, and accepted the fact, that in the final analysis victory in arms alone could save the parks, and therefore these areas must play their part in the war program, always with the principle held firmly that only if critical necessity so dictated (with no other alternative available) would material damage to the vital scenic, scientific, and historic treasures of the System be permitted.

Reverberations of War

As the war progressed, the National Park System assumed a far greater role in the war program than at first seemed possible—and happily without essential injury to its significant features. By the time the war ended, some 2,400 permits and authorizations for use by the military arms of the Federal Government and by war agencies had been issued. The parks echoed to the tread of men in uniform, to the sounds of Army tanks and trucks and artillery. Training in convoy driving on mountain roads gave soldiers an opportunity to bivouac, and frequently to rest for a day or two, in the wilderness parks. Skiing and mountain crafts were taught troops by the national park rangers. Winter equipment of various types was tried out in the park snow and ice. There were highly hush-hush communications activities in radar and radio, in enemy detection and other fields. Tactics were taught and patriotism engendered in the military battlefields which once played a bloody, yet inspiring part in shaping our national destiny. Some of the uses

Destiny

To everyone who glimpsed the country beyond the Appalachians, land was a part of the manifest destiny of Americans.

—WALTER HAVIGHURST

were spectacular; some routine. All were important in the defense and war programs.

There were moments of intense suspense, when some use threatened commercial despoliation of irreplaceable park resources, as when proposals for cutting menaced the Sitka spruce in Olympic National Park. Happily the Army, the Navy, and the civilian war agencies cooperated fully in the principles of park protection.

Healthy Reactions

Now, on the eve of the 1946 season, the National Park System has emerged intact from the period of war use, unexploited and unspoiled. The principle of land use initiated with the creation of Yellowstone National Park has been sustained and strengthened; and the National Park Service is again devoting all its energies to its primary role of providing enjoyment and inspiration to the people of today while protecting the parks and monuments unimpaired for the people of the future.

When VJ broke the back of the war, it also smashed the dam holding back travel. On came visitors in sufficiently flood-like proportions to cause apprehension. Caring for more visitors than in comparable periods during 1941's peakload, while operating on war rations and with many facilities closed, taxed the ingenuity of park administrators and rangers and concessioners alike. But the joy of the people in their newly regained right to travel stimulated park people to meet their needs, somehow.

This Very Summer

Heavy travel continues, and the 1946 season opens once again on a prewar basis with hotels, lodges, and camps in operation, and transportation systems not only conveying visitors from train, bus, or airplane to their lodgings but also featuring the sight-seeing trips that were banned during the war. Exceptions to full hotel operations are the Ahwahnee Hotel in Yosemite National Park which has been used as a Naval convalescent hospital and will not be rehabilitated in time for use this summer; and possibly the Wawona Hotel in the same park, which is awaiting replacement of fire-destroyed refrigeration equipment before its opening date can be set. Free automobile camps will be operated by the Federal Government as in the past, the major camps having individual sites for car with adjacent fireplace, picnic table and chairs, and running water. There also are trailer camps with individual campsite treatment, but without electrical outlets.

Administering the national parks and monuments "for the benefit and enjoyment of the people" is interpreted to mean that the Service is obligated to assist the public, so far as personnel and funds will permit, in deriving from their visits the deeply satisfying experiences that may be had in areas of their types. In the wilderness parks enjoyment

of the breathtaking scenery is paramount; but there also is the enjoyment to be gained from such recreation as fits into the serene picture, whether it be passive or active. Touring the parks by horseback or on foot and climbing their more accessible peaks gives one the feeling of conquering the wilderness and brings a satisfaction difficult to obtain otherwise. For those not able or inclined to strenuous exercise, roads lead to some of the major features of interest. Fishing is always an exciting sport. Hunting is prohibited by law in these wildlife sanctuaries, but "hunting with the camera" is one of the most popular diversions—many a former big-game hunter has discarded his gun for a kodak.

To enjoy the national parks to the highest degree an understanding of their purposes, the why and wherefore of creation of the natural areas, and the significance behind the historical units, is necessary. To this end an interpretive service has been organized. It operates through guided trips long or short, illustrated talks at evening campfires in hotel or lodge lobbies, and museums. The museums, unlike their city cousins, are not an end in themselves. They serve as indices to the rich exhibits of the national park areas, which are themselves the museums of nature or history, as the case may be.

The visitor may take his parks as actively or as restfully as he wishes; may seek interpretation or bask in the sunshine; may go through quickly or be lucky enough to loiter along the way. No matter how he goes, what he does, or how long he stays, he will derive his share of "benefit and enjoyment" from the best of America preserved in the National Park System.

Wholeheartedly

Let us recognize frankly that freedom from gripping want is a basic component of any enduring peace, and that if the world is to have any hope of lasting peace and a stable economy we must all cooperate wholeheartedly to the end that the liberated peoples are restored as rapidly as possible to a self-sustaining basis.

—Herbert H. Lehman

Land Reform in American-Occupied Germany

By WAYNE D. RASMUSSEN. *This article, written from the viewpoint of possible German action, is based upon texts that are available to the public, but apparently the material has never been brought together in this way. The newspapers cited were published in Germany for general distribution and copies were sent to the Library of Congress, the New York Public Library, and other libraries in this country. The campaign posters were posted in public places in Germany with the approval of the Military Government. The political party programs mentioned, and not otherwise identified as to source, appeared in issues of German newspapers, several of which were brought back to this country by the author.*

THERE ARE STILL many large landed estates, mostly feudal in origin, in the section of Germany occupied by the American army. These estates and the possibilities of a general land reform have been the subject of considerable discussion in newspapers and political party programs. The discussion has increased since the announcements by provincial German governments in the Soviet-occupied zone that land reform has been completed there on the general basis of the subdivision of large estates into 12-acre tracts.

American-occupied Germany is divided into three states, Greater Hessen, North Wuerttemberg-Baden and Bavaria, each headed by a German government. These state governments have been delegated certain powers under the supervision of Military Government and are the highest German authority in the American zone. Any immediate action by the Germans towards land reform would necessarily be undertaken by the state authorities. The first of the state governments to take up the subject publicly was that of Greater Hessen which began work on the problem late in 1945.

The first announcement of the work being done was made in the November 28, 1945 issue of the *Wiesbadener Kurier*, a German-edited newspaper published, as are most newspapers in the American zone, under a license granted by the Information Control Division of Military Government. The paper quoted the German Minister of Agriculture of Greater Hessen as saying that the problem was important and should sooner or later be handled uniformly throughout Germany. The Minister announced that there were about 1,100 landed estates of more than 247 acres in Hessen and that these es-

tates comprised about 40 percent of the area of the state. However, only 7 percent of the agricultural land is in the estates; the remainder of the large holdings is in forest and non-agricultural lands.

On the same date, November 28, 1945, the *Darmstaedter Echo* published an editorial approving the idea of land reform. The author said that the problem was political and that a satisfactory solution would be one means of improving the food situation.

In its issue of December 1, 1945, the *Rhein-Neckar-Zeitung*, published in Heidelberg, featured an article calling for land reform in Baden. Its writer thought that the need for the subdivision of large estates in Baden was not so obvious as in certain other areas but that it was nevertheless a very important objective. Statistics for Baden as a whole, including both the American and French-occupied zones, showed 254,938 owners of farm lands. Of these 61 percent owned less than 5 acres each; 24 percent owned between 5 and 12 acres; 13 percent owned between 12 and 49 acres; 2 percent owned between 49 and 247 acres; and 0.23 percent of 594 families owned 247 acres or more. These 594 large landowners held 482,571 acres of land, while the 154,607 smallest owners held only 262,193 acres. Several of the largest estates and their owners were listed by name. The writer did not point out that only 5.7 percent of the total farm land in Baden was in estates of over 247 acres.

Three principal reasons for promoting land reform were advanced. The first was political. This writer said that the large landholders had always been a force for reaction and militarism and now the country had a chance to suppress this force by democratic means. Second, the subdivision of estates would add to the short food supply by bringing uncultivated land into production. Third, land would be made available for the many farmers who had very small plots and for refugees from the east.

Under the plan advocated, distinctions would be made between certain types of large owners. Lands owned by war criminals and by active Nazis would be confiscated. While the point was not mentioned in that article, the opinion often expressed by interested Germans is that the lands owned by proven Nazis should be confiscated without payment while the lands owned by non-Nazis should be paid for over a period of years. The writer of this newspaper article would exempt three types of estates from confiscation—model farms, estates devoted to seed production, and church lands.

He believed that the estates should be subdivided into grants of single plots between 15 and 20 acres in size and that persons receiving land should be free to work it on an individual basis, but facilities should be made available for working on a cooperative basis when that was the wish of the new proprietors.

A week after this article appeared, a news story in the *Stuttgarter Zeitung* contained a brief comment to the effect that it was hoped the proposed land reform would aid the production of food and would afford space for the refugees from the Sudetenland and Silesia.

Readers' Letters

Other newspapers have printed letters from readers calling for land reform. The writer of a letter published in the *Frankfurter Rundschau* in December 1945, had noticed an advertisement of a large estate for sale; he wrote that such an estate could not be bought by a small farmer or farm laborer, but only by an owner of a large estate or by a person who had built up a fortune by war profiteering. These classes, he said, were the ones that led the nation to war by holding all of the land in a tight grasp and then saying to the common man: "You are without room. Why don't you seize the lands of neighboring nations?" He then stated that land reform is as necessary in western and southern Germany as in eastern Germany; that the most important step toward recovery is the liquidation of the large landed estates.

Political Platforms

The interest shown in the public press was reflected in the platforms of the leading German political parties during the campaigns preceding the January elections. The four leading licensed parties in the American zone taking part in the elections were: the German Communist Party, the German Social Democratic Party, the Christian Democratic Union (in some areas called the Christian Social Union), and the Liberal Democratic Party. A fifth, the Democratic Peoples Party, was active in some areas and has a program similar to that of the Liberal Democratic Party. Platforms of the parties were presented to the German people by wall posters, by speakers at rallies, and by the newspapers, which at the present time are nonpartisan and committed to giving equal coverage to all licensed parties.

The Communist Party is the most ardent advocate of land reform. It attacks the owners of large estates as opponents and saboteurs of a truly democratic development and calls for parceling out of the feudal estates in order to eliminate this force from German life. But the land reform must in no circumstances lead to a decrease in production. It is often emphasized that land reform is not a radical action but the correction of an ancient wrong since the land should belong to the people who work it and feed the population. The party in Bavaria prepared a pamphlet entitled "The Communist and the Peasant" and hopes to gain considerable support in this traditionally conservative area. A party spokesman in Frankfurt has outlined a general plan. The program would be undertaken by a committee of farmers, officials, and specialists. Land belonging to owners possessing more than 247 acres (100 hectares), war criminals, and active Nazi party members would be requisitioned without payment, but land belonging to the churches would not be s e i z e d. The expropriated land would be distributed in 20- to 30-acre tracts to farmers who own less than 12 acres, to landless peasants, farm workers, and refugees.

The Social Democratic Party is strongly in favor of land reform but has not formulated a policy for implementing the program. A campaign poster in Bad Nauheim called

for "control of the large landowners and the requisition of ground and soil for settlers." At a regional conference in Kassel in December 1945, a resolution was adopted which called for the division of large landed estates. These attitudes are voiced generally by party leaders throughout the American zone; disagreement comes as to how the policy will be carried out. More sentiment is expressed for compensating the large landowners, provided they were not war criminals nor active Nazis, than in the Communist Party.

The Christian Democratic Union is generally considered to be more conservative than either the Communists or Social Democrats in the matter of land reform but there are divergent opinions within the party on the subject. The official stand of the party was expressed in resolutions adopted at a meeting in Bad Godesberg in December 1945. The resolutions stated that to insure a free agriculture, cooperatives should be built up and agricultural and gardening settlements should be founded to offer the greatest number of Germans their own soil and self-sustaining work. On the other hand, a campaign poster appearing in Bad Nauheim was worded: "You farmers, do you wish that your farm-yards, your fields, and your livestock remain your property? . . . Vote for the Christian Democratic Union!" A party spokesman wrote in the *Rhein-Neckar-Zeitung* in January 1946, that there could be no excuse for a land-reform program which would put a greater strain upon the already strained economy and not definitely solve the problem, but that the Union was working upon a plan that would attain an economic and socially efficacious order.

The Liberal Democratic Party and other rightist parties have had little to say on land reform. One published statement of policy reads to the effect that the need for land by refugees coming into Germany offers a chance for a reexamination of land division on the basis of established land rights, but that necessary land reform cannot be effected by the confiscation of land without compensation.

Prospects

It appears from the campaign promises and opinions expressed by leaders that should the German Communist Party or the Social Democratic Party come into power, a real effort will be made to carry out some type of land reform which will include the subdivision of the large estates. Should the Christian Democratic Union come into power, there may be some steps toward land reform but the results may vary from area to area and on the whole remain comparatively unimportant. Should the Liberal Democratic Party come into power, any readjustments in land holding will be made along traditional lines.

The results of the first free election in Germany since 1933, held in smaller communities and rural areas in January 1946, indicated that the Social Democratic Party and the Christian Social Union in Bavaria were the strongest parties. The Social Democrats, as a rule, received a plurality in urban communities and had a substantial lead in Greater Hessen. The Christian Democratic (or Social) Union was predominant in rural and Catholic areas, being especially strong in Bavaria and North Baden. The large inde-

pendent or minor party vote (as high as 50 percent in North Wuerttemberg) obscured the significance of the voting as an index of sentiment on clear party issues such as land reform. The only majority anywhere was of the Christian Democratic Union in North Baden.

It is doubtful that the voting was influenced by the stands of the parties on the question of land reform but public opinion may make it a true issue in the future. Certainly the present time of economic stress and reorganization offers advocates of land reform in Germany the best opportunity for action they have ever had.

Financial Planning FOR Farm AND Family

By NORMAN J. WALL. *What shall we do with our wartime savings? Shall we keep or spend them? And spend them for what? These questions are frequently asked farm leaders everywhere. So we asked the head of our work in agricultural finance for his answers. Here is his reply.*

SELDOM have farmers in such large numbers had the opportunity of putting into operation sound plans for their future financial security.

As a result of the wartime expansion of incomes and the scarcity of purchasable goods, farmers now hold about 17 billion dollars worth of liquid assets—bank deposits, currency, and war bonds. Further, rising values of land and personal property accompanied by reduced indebtedness have increased substantially farmer equities and borrowing power. Sound decisions concerning the use of funds—arising from current income, savings, or new loans—are vital to the future financial security of farm families. Unsound decisions may lead to the wasting of liquid assets or may even involve new and grave financial risks.

After World War I, attempts by farmers and others to pyramid wartime profits by buying additional land, by ill-considered investments in high-priced equipment and livestock, and by other unsound ventures, built up an excessive volume of both real estate and non-real-estate debt. This high level of indebtedness based on temporarily inflated income prospects was the source of acute financial distress following the collapse of the wartime level of farm prices. To avoid repeating the mistakes which followed the close of World War I, farm families will now need to look

ahead and determine with care their future financial policies.

Despite the fact that the majority of farmers are in a better financial position than at the beginning of the war, the accumulation of sizable individual savings has been very uneven. It is probable that for most farmers the various desirable types of expenditures for the farm and home will involve funds in excess of those they will have available. Careful planning will be required to budget expenditures from savings, income, and new loans to obtain the maximum future benefits. No single set of rules or principles may be set up which will be applicable to all farmers. In general, however, farmers' financial policies may properly be aimed at one or more of these objectives: (1) Improved or stabilized income prospects, (2) greater financial security, and (3) higher farm-family living standards.

Improving Income

Farmers were wearing out plant and equipment without being able to make adequate replacements during the war. Even before that, in many areas farm income was so low that the farm plant could not be maintained on an efficient basis. As the farm must provide the income to meet operating expenses, retirement of debt, and family living, it is obvious that in many instances the expenditures for repairs and replacements to keep or to place the farm on an efficient basis, should have the first call on savings and current income. Where the farm is too small to provide an efficient operating unit, the purchase of additional land likewise may be desirable. Most farmers will also find it profitable to get improved types of seed and of livestock. In general, these various expenditures should be made to obtain the best combination of resources—land, labor, and equipment—to obtain the lowest possible production costs.

With land prices at high levels in most areas, expenditures for improving or stabilizing the income prospects frequently will bring better returns than the purchase of unneeded additional land. The significant increase in farm output during the war has taken heavy toll of soil resources. Expenditures for lime and fertilizer to restore and increase the productive capacity of these farms will prove to be a sound investment. The practices that have been developed in recent years for building up the carrying capacity of pastures have demonstrated that expenditures for pasturage improvement can materially stabilize and increase the farm income.

Capital investments in other types of soil conservation may not only be profitable but in many cases are essential to maintain the income-producing capacity of the farm. The reference here is to such measures as contouring, terracing, strip-cropping, grass waterways, tiling or open-ditch drainage, and irrigation where needed.

The increased returns that may be expected from such investments are indicated by a recent Illinois study which reported (in Illinois Farm Economics Nos. 129 and 130) that "The following of a complete conservation plan, • • • plus the efficient use of the legumes and grasses through livestock, returned, at present price levels, $589 a year above the nonconservation system of farming on the equivalent of a 160-acre farm in McLean County, $720

in Madison-St. Clair Counties; and $892 in Stephenson, Jo Daviess and Winnebago Counties."

In those areas where reoccurring periods of deficient rainfall appreciably reduce annual crop yields, farm income can be increased and stabilized through provisions for the storage and maintenance of adequate feed reserves. Such reserves will materially offset the risks of crop failure with the resulting inability to continue or complete a livestock-production program. At the same time it eliminates the additional costs, such as from transportation, incident to the purchase of feed that normally may be produced in whole or in part on the farm.

Financial Security

Of first importance to farmers with heavy burdens of debt will be the reduction of these obligations to manageable shape. Fortunately, farmers during World War II generally have followed a sound policy of reducing their debts which is in sharp contrast with the increase of debts during World War I. Farm-mortgage indebtedness increased from about 5 billion dollars at the beginning of 1915 to 8½ billions in 1920. In a similar 5-year period during World War II farm-mortgage debt decreased from about 6½ billion dollars to slightly more than 5 billions between 1940 and 1945. Short-term indebtedness which more than doubled in the 5-year period of World War I remained relatively stable during the comparable period of World War II. However, as compared with 1920 we are now in a period when forces for building up of debt are still active.

Despite the marked reduction in debt during the latter war period, large numbers of farmers carry debts that are high relative both to the value of their assets and their income prospects. This is particularly true of those with little capital of their own who have just started farming or have expanded in the war years of high prices. For these farmers the use of surplus income for the reduction of this indebtedness to the level of the long-time income capacity of the farm will generally be preferable to most other uses.

With the relatively low level of income in many areas before the war, most farmers had a very narrow margin, if any, between returns and expenditures. As the result of their wartime savings, many of them now have a comfortable feeling of economic security. Many farmers will wish to hold at least a part of these savings as a buffer against any readjustment in income that may develop with the probable shrinking and shifting demands for food and fiber. After the postwar-adjustment problems become clearer, these reserves, as well as unused borrowing power, may be needed, in whole or in part, to facilitate adjustments. Furthermore, just as corporations normally try to maintain some reserves in cash and marketable securities to fall back upon in meeting fluctuations in business activity, farmers will enhance their future financial security through the more permanent maintenance of special emergency reserves. Readily realizable assets, such as war bonds, provide good liquid reserves for meeting unpredictable emergencies — low prices, crop failures, accidents, and other hazards of the farming business.

For those farmers who are approaching the retirement age, a carefully worked-out retirement plan may afford a suitable outlet for savings. Such a plan may include a retirement home on the farm or in a nearby town. When a son is in a position to take over the active farming, partnership arrangements may be made to assure an income to the retiring farmer and, at the same time, enable the son to build up an equity in the farm enterprise. By such an arrangement the son could profit from the managerial experience of the father who has developed the farm over many years.

Insurance

The purchase of life insurance and annuities also provides a means whereby the farmer—as well as the city man—may add to the economic security of his family and himself if he has surplus income or funds. Through these purchases he can provide for the payment of debts and taxes, for the continued operation of the farm in the event of his untimely death, and for a future income for himself if he lives to old age. The insurance contract can provide protection for dependents, relief from premium payments in case of disability, and an income when the income-producing ability of the farmer is on the wane.

Although the interest earnings allowed by insurance companies are not high, their investments are made reasonably safe through diversification, and the insured does not have to choose between investments. Insurance or annuities bought by periodic premium payments begin to earn interest immediately. There is no loss of interest while enough money accumulates to be invested elsewhere.

Improved Family Living

In making financial plans for the future, the needs and wishes of the family should be carefully considered. The farm financial plan should recognize that the farm is not merely a very necessary income-producing property but is a home as well. The home should have, so far as reasonably possible, such conveniences and comforts as will make it attractive to the whole family.

Serious lack of modern household improvements on our farms is indicated by Census data. The problem of keeping a desirable number of children on the farms and of attracting satisfactory farm workers will not be eased until there is a reduction in the disparity between farm and city homes in the way of conveniences and comforts. Running water in the kitchen and bathroom should rate high in any priority for farm-home expenditures. Electrical connection and equipment for the home and central heating add greatly to the comfort. These and other home conveniences contribute much to efficiency as well as to the satisfaction of the whole family.

Finally, and by no means of least importance, is the provision in the budget plans for expenditures to maintain and improve the health of all members of the farm family and to provide adequate education for the farm children.

HUNTING Old Books ON Agriculture

By ALFRED STEFFERUD. *Many of our readers will welcome this little story that was brought us from England by the previous editor of this magazine.*

I BECAME a Collector of old books on husbandry the day I met Mr. Long. Up to then I was just a collector.

It started about the time I was learning to read, when a neighbor who was moving away left a box of books on our stoop. My part of that windfall was a handful of pamphlets, farm publications from Washington and St. Paul. They had brilliant pictures in magenta and cerise showing diseased livers, before-and-after plant ailments, and such. I could not read them, but they kept me in thrall a long time.

Then came, from where I know not, a small book on gophers. Every time I had the grippe I struggled with it, for want of something else. I remember it fondly as the dullest book I have ever encountered; having learned so young what the nadir is, everything else since has been comparatively interesting.

But to get to Mr. Long, I must pass lightly over the intervening years. High-school Vergil was good enough to make me want to own my own copy of the Georgics, that well-spring of rural poetry, fancy, and fact at which have drunk, sometimes with a nod of thanks but oftener without, writers and practitioners of farming these many centuries.

Wise, eclectic Columella (who wrote that golden sentence: "But agriculture alone, which is without doubt most closely related and, as it were, own sister to wisdom, is as destitute of learners as of teachers.") was one of the first of these. You can move forward and backward with Columella as a fulcrum and discover a corporation of great minds at work and play, each copying or improving on another, and all of them, particularly when writing from direct observation, pretty durable and correct, even in an age that knows 2,4-dichlorophenoxyocetic acid.

Cato leads that shining parade. His recipe for preparing ham is still read and enjoyed, if not followed, by contemporary Virginia ham fanciers. Near him stand Varro, whose self-assured, delightful dialogues not even a murder can interrupt, and, among others, the men that Varro and Columella often quote: Scrofa, the two Sasernas, father and son, and Stolo.

A goodly, forthright company, they, who spoke out clear and strong on problems that today engage the *Country Gentleman, Farm Journal, The Land,* and many another: How to plow on a slope, where to put your farmstead, how to treat your neighbors, what to do on holidays, the

handling of manure and soil, hired men and overseers, new equipment and methods of tillage, the time to plant, the care and joys of keeping bees, and, above all, the pleasures and disappointments of life in the country.

One thing leads to another, you see. You happen on Vergil, range into Hesiod, Reitzenstein and the "lost books," and, as a change from the Ancients, happen on their charming copyist, Gervase Markham.

Then you are off again, exploring the British bucolic writers of the eighteenth century and earlier, discovering their debt to the glory that was Rome (for example, the Latins' accounts of how a Moorish mare was impregnated by the wind, or relative merits of brown and black animals), wondering why so few farmers are writers, making side excursions into typography and fine presswork, and delving into the pleasant fields tilled today by Gove Hambidge, Russell Lord, Robert Frost, H. J. Massingham, E. B. White, Clare Leighton, and some others, all of whom love the soil but who, unlike their counterparts of other generations, write with more urbanity, more wit, and more common sense.

Even in War

I was thus exploring, discovering, and delving, in wartime London, still a mere collector, when I first heard about Mr. Long.

Part of my work, I should explain, was in Grosvenor Square, in what had become an Americanized West End. The other part was in Bush House, hard by Fleet Street and the section that Dickens and Johnson knew. In between, easily reachable at lunch time, lay my zone of exploration, New Bond Street, Tottenham Court Road, the Museum, Russell Square, Berkeley Square. The bookmen there yielded (besides information about Mr. Long) much for soul and thought. I learned a great deal about the history of agriculture in this process of browsing and buying. I saw another aspect of the blitz the Londoner survived, with integrity intact. I came into possession of some cherished volumes—Markham's "Inrichment of the Weald of Kent"; Walter Blith's "The English Improver Improved"; John Worlidge's "Systema Agriculturae"; Mortimer's "The Whole Art of Husbandry"; R. Bradley's "The Country Gentleman and Farmer's Monthly Director"; and several by Arthur Young, the over-rated (as far as I'm concerned) friend of Jefferson.

And not only books. I got a new conception of agriculture as a philosophy universal and eternal, which every generation discovers anew. I got a new respect for bookselling as a profession, especially as practiced by the British, by knowledgeable, friendly firms like Thomas Thorp, Maggs Bros., Quaritch, David Low, and a half dozen others, who respect books.

David Low's engaging Miss first told me about Mr. Long during my third or fourth visit to Cecil Court. "You know," she remarked one day, "if you are interested in old agriculture, the man to see is Mr. Long; he lives in Esher." She had seen his card in a book-dealers' journal, but she could give no further vital data about him. I found out later that Esher is in Surrey, not far from London, and I could easily get there by train.

One bright fall day I started for Esher, feeling, with some excitement, that something was ahead of me, that I would be testing a germinating theory that the difference between a Collector and a collector is one of intuition about whether to buy a book and where wanted books are to be found, almost without looking.

On the Search

Thinking I might save a wrong turning, I asked at the Green Man or Spotted Cow, or whatever the pub near the Esher Station is named, how I could reach Mr. Long's shop. The Miss there did not know, and the pooled thoughts and guesses of everybody in the place produced only the suggestion that the stationer up the road might know. After all, I reflected, I couldn't expect persons in a public house to know about book dealers.

The stationer was of no help: He knew of nobody named Long. There was no antiquarian bookseller in Esher, he was sure—in fact, there was no book shop at all.

Across the way was a real estate office. There, surely, would be some kind of directory. There was, and it listed the name Long. But there were two of them, and both named H. C. Long, without hint of work or profession. I was about to flip a coin, when the Miss suggested it would be quite easy and time-saving, really, to reach one of them, the one that lived in Manor Road. If he were not the one I wanted, she said brightly, I could then concentrate on the other H. C. Long. Just take the bus outside, she said.

The bus had charged along a mile or two when the lady conductor reached me. I tendered a shilling and my desire to get to Manor Road. Manor Road? she repeated. Manor Road? There's no Manor Road around here, not on this line at least.

This had gone too far, I told myself. David Low's Miss or no David Low's Miss, there is no specialist in husbandry in Esher or Surrey. The whole thing is silly, when there's a war on. I left the bus, to get one for the return to Esher, at a small stationer's shop. I looked idly over his few books, and he asked me if I had anything particular in mind. No, I replied; my interest was in older books—husbandry, to be exact. His face lighted up.

"Oh," he exclaimed, "the man for you to see is an old friend of mine. He lives at the top of this road; he has an excellent collection of books on agriculture. His name is Long."

He paused: "But you've come at the wrong time. Mr. Long isn't at home these days. He's retired, but he has taken a war post in London, and is available only on Saturdays."

Still Farther

Well, I reflected, I'm this close; maybe somebody is at home; maybe I can see the books at least. So I went to No. 10 Manor Road and rang the bell.

A good, gray man, with a pipe, came to greet me. I stated my business; I was looking for Mr. Long, but since he is not at home, maybe I could see the books?

"I am Mr. Long," he replied. "I happen to be on leave this week. I'd be glad to show my books."

In the Garden

In the pleasant little garden house he had built for his books, Mr. Long and I talked about men and farming and books all afternoon: Farming in a Britain at war; the new great men of the earth like Russell, Gilbert, Lawes, and Bennett; Rothamstead's hundredth anniversary, and what it means to have research planned for a hundred years, not for the next election; how easy it is to spot the artificial in writings about the country; the recurrence every once in a while of a great public preoccupation with some aspect or other of farming, such as plowing—vide Columella, Jethro Tull, Thomas Jefferson, and this very day in America. I learned that for years Mr. Long had held an editorial post in the Ministry of Agriculture much like the one I had in the Bureau of Agricultural Economics; now he was on the staff of a country magazine in London. His collection was the hobby of a lifetime; now he was selling duplicate copies and such.

We talked at length about Jethro Tull and horse-hoeing husbandry. That was one of the landmarks of agriculture that I did not have; a good early edition was almost as rare as Thomas Tusser's "Pointes of Husbandry." All I had been able to get was Cobbett's version of it. Did Mr. Long have a copy? No; he had not seen one in years, but he would be on the alert for one for me.

We had come to the inevitable subject of wartime food and rationing when Mrs. Long came to tell us tea was ready.

I shall never forget that tea. There was cake, good cake, but I was impressed more by what it meant than the cake itself. The cake meant months of scrimping and planning and doing without, and I knew, although there was not the slightest hint for me to go on, that it had been baked for the son in service who would be home on leave the following day. For all they let on. Mr. and Mrs. Long had cake like that every day.

Time came for goodbyes and to tuck in my briefcase the books I had bought. But you can't say goodbye to people like Mr. and Mrs. Long; you know that even if you never see them again there will always be strong ties of affectionate, respectful memories. And thank you, for such an afternoon, can never be said in the way one wants to say it.

Yes, I decided on the way back to London, my theory was correct.

And Then—

Two months later I was packed, ready to start for home. The very last afternoon in London, when I returned to my flat from completing last-minute odds and ends to gather up my luggage, I found a note under my door. It was from Mr. Long. He thought he had located a Tull; a friend knew a man who had a copy. Did I want it? My answer went right back. Yes, I wrote, get it if you can and it doesn't cost too much, and mail it to me at home. Not long ago it came.

Where can I get a copy of Tusser?

Books

MANAGING A FARM. By *SHERMAN E. JOHNSON AND ASSOCIATES.* D. Van Nostrand Company, Inc. New York. 365 pages.

IN THIS VERSION this book is designed especially for use by actual farm operators and by prospective farm operators of family farms and part-time farms. In its original form it was to guide young men in the services in planning possible future careers in farming. The direction given to it by this original purpose has been offset sufficiently by revisions and added chapters to make it in its present form a well-balanced and orderly presentation of the problems of farm management viewed from the standpoint of a farmer already on his own farm.

The authors speak of their book as designed to give "practical guidance in thinking through the management problems on a full-time family farm." This is an admirable statement of its objectives and approach. It does not undertake to lay down rules for success. Instead, it shows in simple terms how to analyze all the major types of problems that arise on family farms, and then for good measure adds an excellent chapter on the special problems of part-time farms. Simple but highly useful forms of records are presented, and forms of tables of receipts and expenses to construct in testing out the probable returns from alternative farm organizations. The data included in a limited number of carefully selected tables—such as those giving the rate of depreciation and "duty of machines, or average day's work of an experienced farm hand—are intended to be illustrative rather than to serve as direct aids in actual farm planning, for it is realized that averages of this sort do not fit the actual farming of any particular region or area. The term "requirements" is used sparingly throughout the book.

Older readers will remember that workers in the Bureau of Agricultural Economics, along about 1924, put together a little book under the title *Practical Farm Economics,* which was issued as a public document. They hoped that it would be widely used by operating farmers. It wasn't, and was soon forgotten. Will this one suffer the same fate? This reviewer expects it to fill a much more important role. This one any farmer with a high-school education, *or its equivalent,* can read and still get a good deal out of, in the way of new ideas and new ways of thinking about his problems. As a matter of fact, if he really thinks his way all the way through this book, he will have acquired more economics than is now taught in some of the present college courses in farm management. Much of it he will absorb without knowing that it is economics, for this book is remarkably free of the usual jargon of economics.

—*John D. Black.*

THE ECONOMIC MIND IN AMERICAN CIVILIZATION 1606–1865. By *JOSEPH DORFMAN*. The Viking Press. New York. Two Volumes.

IT IS NOT often that a person has the opportunity to review a truly great work such as this one. Joseph Dorfman has written a complete and thoroughly documented account of the prevailing climate of economic opinion from the earliest colonial times to the Civil War, as expressed by the "expert," the legislator, and the man of business. It is a source book to which all persons working in the social sciences will want to turn for information concerning the growth and development of economic institutions, common economic problems, and the writing of early economic thinkers in American civilization.

But this two-volume work is more than a source book. It is a well-told story. And from reading this historical story one cannot help but gain or improve or focus more sharply the most important single analytical tool for dealing with social problems—namely, *perspective*. The social problems of today, and our apparent inability to cope with those problems, seem less depressing after one has read this account of the never-ending bickering and quarreling of our predecessors over economic issues—most of which were never settled satisfactorily.

We simply made "progress" moving from one failure to the next, and I say progress because over the long period, 1606–1865, the individual life of the poor as well as the rich was increasingly dignified. At the time of the first colonizations human rights were nonexistent when they happened to conflict with property rights. Whereas by 1865 "gentlemen of quality" were no longer arguing openly that the economic order existed exclusively for their private benefit, we had fought and won a war that made it impossible for one man to *own* another man, and certain of the conservators of the existing social order to be found in the academics of higher learning were inclined to believe a little education of the masses might be a good thing since "It is necessary that 'a sacred regard for property in all its manifestations should be early instilled in their souls.' "

Mr. Dorfman does not build this sense of perspective by telling the reader that perspective with regard to social and economic problems is what he needs. He does it by working through the profusion of opinions and arguments advanced by the obscure and the prominent men of the day who concerned themselves with the economic problems which arose betwen 1606 and 1865. To lend body to this review let us look at some of these problems. The most persistent and disturbing problem of the colonial period from Massachusetts to Georgia was the lack of specie (hard money) upon which to base or facilitate trade and commerce in the developing country. English specie would not flow in readily, because the colonies were always in a debtor position on a net basis. The colonists tried to remedy this lack by issuing all types of paper money and by using foreign (non-English coins), but never did they find a real solution to their

problem—never were they able to establish and maintain an adequate money supply to carry on trade among themselves.

Second to the perennial shortage of money, was the short labor supply in the colonies—particularly skilled workers. Wages of free labor were held high by the short supply, thus creating a situation in which there was constant agitation for wage controls of one type or another. To circumvent the short labor supply the southern planters turned to the importation of black slave labor and the northern colonists to indentured servants. But indentured servants in the northern colonies were never forthcoming in the quantities deemed adequate by the men of commerce—always the cry was for more and more indentured servants.

In the early national period the controversy over the public debt created by the Continental Congress during the Revolutionary War held the center of the economic stage. Should the Continental notes be honored at face value by the new Government or at their going commercial rate? That was the question which raged through the thirteen States. Closely related to this problem of the public debt was the question of a national bank to aid the Federal Government in its financing operations, and to help establish a "sound" and adequate money supply. This national bank question raised in the Washington Administration nearly tore the Jackson Administration to shreds, and was still a live issue in the Lincoln Administration.

But new problems peculiar to a new and struggling nation were thrown up in the early 1800's—protectionism vs. free trade, the issue of internal improvements, and slavery. These new questions had serious sectional implications. For example, the Middle Atlantic States were strong for tariff protection since manufacturing was developing in that area, whereas the Cotton South defended with equal vigor the free-trade position. And with the development of the West the advocates of free labor and the advocates of slave labor met head-on and, as we know, they found no solution to their problem except in war. In sum, the economic history of this country during its first 250 years was trying and turbulent. Many economic problems of today are not new, and most are not more difficult than those of a century or two centuries ago; they are simply the problems which a people striving to achieve a maximum of individual freedom must expect to meet at each new turn of events.

The only real criticism of Mr. Dorfman's work is that it ends with the year 1865. However, the author promises a second manuscript which will fill in the gap between 1865 and, say, 1945 in the not-too-distant future. In the meantime this reviewer would make the suggestion that every person working with current social problems spend some time, valuable time if necessary, to relive the economic trials of early Americans as described in The Economic Mind in American Civilization 1606–1865.

—*Willard W. Cochrane.*

AGRICULTURE IN AN UNSTABLE ECONOMY. A RESEARCH STUDY FOR THE COMMITTEE FOR ECONOMIC DEVELOPMENT. By *THEODORE W. SCHULTZ*. McGraw-Hill Book Company. New York. 283 pages.

THIS BOOK will interest a wide range of readers. Professional economists will want to have the latest views of the professor of agricultural economics at the University of Chicago. Businessmen will want to know what the C. E. D. research staff is thinking about agriculture. Legislators, writers, publishers, farm organization leaders, and many others concerned with the perennial "farm problem" will no doubt search the volume.

There will be meat in the book for all of them. The economists, provided they have followed Schultz's writings of the last few years, will find little that is new and different.

The book is divided into four parts. The first two primarily describe and hastily analyze "problems that have their origin in the interrelationships *between* agriculture and the rest of the economy." The other two appraise recent agricultural policies and suggest changes for the future.

For the years immediately ahead, the author predicts that our agriculture will find itself substantially overextended. "Barring a pronounced inflation . . . within one or at the most two years after the war, farm prices are likely to recede . . . and many of them are likely to break through the price floors set by the Government . . . chronic agricultural surpluses in . . . fats and oils, wheat, cotton, rice, coffee, and sugar . . . are likely to put in their appearance within two to five years after the war." In short, the agricultural situation of pre-war years is likely to be with us again.

In his diagnosis of the agricultural situation for the long pull, Schultz emphasizes two major problems: (1) the long-time one of low earnings of farm people relative to earnings in other sectors of the economy, and (2) the short-time fluctuations in agricultural income.

The first he attributes mainly to a secular tendency for the growth of demand for farm products to increase at a slower rate than the growth of supply. The second he explains principally by wide variations in the demand for agricultural products while the total volume of agricultural output continues on a fairly stable level.

In his policy recommendations, the author not only writes a prescription to treat these two major ills but he also offers some strong medicines on production adjustments and a price policy for agriculture.

Since the long-time problem of relatively low earnings is manifested mainly by underemployment among a large proportion of farmers and hence indicates a need for fewer people in agriculture, Schultz recommends that national policy should aim at: (1) expanding nonagricultural industry; (2) encouraging more leisure among farmers; (3) providing an improved national employment service; (4) encouraging mobility by a greater public investment in education, medical care, nutrition, and housing for rural people; and (5) the discouragement of back-to-the-land movements. The first he regards as by far the most important. At no

place does he do much more than set forth these objectives. Ways and means of attaining them are very meagerly discussed.

To cope with the short-time or cyclical instability of farm income, he places first emphasis on stabilizing nonagricultural production at high levels. As a secondary measure, he suggests a system of compensatory payments to farmers, counter-cyclical in nature, and made in ways that will not disturb farm production and marketing. Just how these two conditions are to be met is by no means clear. Crop insurance, the storage of feed grains, and improvements in farm technology are also suggested to stabilize production and farm income. The stabilization of nonagricultural production is primarily a problem in fiscal-monetary policy, he says, and is outside the scope of this book. To neglect this issue is, of course, to leave a big and important gap. Admittedly the problem is complex. But if agricultural economists have nothing to offer toward its solution, they leave untouched one of the really serious forces affecting the welfare of agriculture.

In production-adjustment policy, Schultz's principal points are that attempts should not be made to synchronize agricultural production with the ups and downs of business activity and that in order "to bring about the best use of agricultural resources . . . *we must make prices, namely, the relative prices of both factors and products, the keystone of agricultural policy.*" He also suggests soil conservation, better farming practices, improvement in tenure relations, enlargement of inadequate farms, and special aids to "depressed areas," as production adjustment techniques.

Among his most important objectives for a proper price policy for agriculture are: (1) stability in the general level of prices at a full employment level of output; (2) less discrepancy between domestic and foreign prices; and (3) a system of forward prices for farm commodities set at such relative levels one to another as to bring about the most efficient use of resources. He is extremely critical of the present parity standard, and insists that any criteria based on past relationships, instead of future expectations, are unsound in principle.

Space does not permit an adequate evaluation of Schultz's policy suggestions, but many readers will no doubt conclude that he has done an almost phantom-like job of "broken field running." He recommends program after program with little indication of their size, cost, method of implementation, or connecting interrelationships. Now and then he probably starts toward the wrong goal line, as when he recommends a stable price level with full employment. A period of full employment would almost assuredly be accompanied by declining unit costs. A stable price level under such conditions would result in extremely high returns to stockholders, managers, and well-organized industrial workers. Other groups would benefit very indirectly if at all. To maintain full employment under such conditions would be very difficult. Other views, too, merit careful analysis—for instance, his heavy reliance on pricing to efficiently allocate resources. He readily recognizes that pricing will offer little toward a solution of what he correctly calls, "a

fundamental disease of long standing, [namely] a bad case of excess resources in agriculture." Moreover, his combination of forward prices and compensatory payments on a commodity basis may not be highly effective in efficiently allocating resources *within* agriculture. Much depends on the way in which the two are tied together. However, the "general drift" of his policy recommendations are in a sound direction. More important than the sins of commission are those of omission. In refraining from discussing both "agricultural welfare policies" and general employment policies he leaves much unplowed ground for the future.

—*James G. Maddox*

UNEASY MONEY. By *EDWARD H. FAULKNER*. University of Oklahoma Press. Norman, Okla. 114 pages.

CONTEMPLATING the future, the author of this brief volume voices the concern felt by many regarding the future stability of our economy. The possible repercussions from our new position in world affairs, the uncertainties created in adjusting from a wartime to a peacetime economy, the "300-billion-dollar" public debt, high prices, and high wage rates are discussed. A note of alarm is sounded. At times he becomes pessimistic in the extreme, as when he advises everyone possible to grow a garden during the next few years in order to have an "assured food supply" in case of a breakdown in our complex economic life.

But his major thesis—reduction in production costs in order to provide commodities at lower prices—will strike a responsive chord, even among most economists. Less acceptable to many agriculturists will be his proposal that agriculture be the first to start this trend by reducing its own prices in order to get the process started. But the pill is sugar-coated by the argument that net farm incomes can be maintained with appropriate reductions in costs.

Ideas first promulgated in "Plowman's Folly," the author's previous successful though provocative book, form one of the important keys to possibilities for cost reductions in agriculture. Several interesting chapters are devoted to possible new methods for bringing these about, generally revolving about those changes that would result from more widespread use of green-manure crops and incorporation of large quantities of humus in the surface soil. Elimination of crop rotations as generally conceived is one innovation; substituted instead is the growing of a crop year after year on that part of the farm where it is best suited from the standpoint either of soil or of desirable location with regard to the farmstead. Suitable cultural practices would make this possible. It would result in lower costs by growing such bulky crops as hay near the barn and would provide for closer adjustment of crop acreages to demand, through elimination of the "need" for fixed acreages because of a fixed rotation system. Other possibilities are considered, including the possibilities in farm chemurgy.

Little substantive evidence is given for the author's contention that these practices will reduce costs by about one-half. Presumably the major reduction would be brought about through increased yields and accompanying reductions in unit costs. Increased yields—as well as increased prices—have been a major factor during the last few years in increased net farm incomes, although cost rates have gone up substantially during the war. Most students of agriculture expect agricultural production to continue at high levels, even without any revolutionary changes in farming systems and practices.

It is easy to agree with the thesis that reduced production costs will be necessary in the future, but it is much more difficult to know just how these reductions will be brought about—not to mention the many economic and financial problems that will be created as well as solved by a drastic lowering of the general price level. Many of the ideas expressed are stimulating and thought-provoking, although one suspects that the author is better versed in agronomy and soil culture than in economics and finance.

—Carl P. Heisig

THE FARMER'S LAST FRONTIER: AGRICULTURE, 1860–1897. THE ECONOMIC HISTORY OF THE UNITED STATES. Volume V. By *FRED A. SHANNON*. Farrar & Rinehart, Inc. New York and Toronto. 434 pages.

MUCH has been written on the history of agriculture in the United States during the last half of the nineteenth century. Most of this material has dealt with selected problem areas or with topics of special interest to individual authors. Shannon, however, is the first to undertake and accomplish the valuable task of evaluating these scattered materials in relation to each other and presenting a comprehensive and balanced account of the changes in agriculture in our country between 1860 and 1897.

During the period covered by this book the United States attained its maturity and emerged as a world power. After the Civil War, agriculture spread rapidly across the western prairies and into the Great Plains, where it came in conflict with the cattle industry, which had advanced northwards from Texas. Slavery had been abolished in the South, but that region had been left without sufficient capital, credit, cheap transportation, and marketing facilities. In the East, farmers were becoming aware of western competition, and in the Far West, agricultural potentialities were mostly undeveloped.

According to Shannon, agricultural adjustments were most difficult and complex in the South and in the interior of the continent. The problems of the South are still but partially solved. Although there was a temporary shift toward crop diversi-

fication and agricultural self-sufficiency during the Civil War, the war's conclusion brought intensification of the one-crop system.

In the western prairies and the Great Plains, the accomplishment was more spectacular. Never before had so large an area been settled and brought under cultivation in so short a time. But in achieving this end, farmers were often the losers. The Homestead legislation, passed in the 1860's, had been conceived earlier when land was still available east of the Mississippi. Farther west, where the laws were applied, both soils and climate were radically different from any that the farmers had hitherto experienced, a homestead of a quarter-section was too small to support a family under semiarid conditions, and most of the land laws passed provided loopholes for land monopolization. Railroads to the Pacific received land grants ranging from 10 to 80 square miles for every mile of track laid, the Desert Land Act seemed almost designed to give special privileges to great cattle companies, and the Timber and Stone Act encouraged the monopolization of all valuable timberland not yet patented in the United States. Individual farmers were unable to cope with organized monopolies, expensive transportation, inadequate credit, and poor marketing facilities. Only when conditions became unbearably bad did the farmers unite, and as soon as the laws they advocated were passed or their economic position improved with periods of national prosperity, farmer organizations declined or died.

Although farming had spread across the continent between 1860 and 1897, agriculture had progressed because of rich land resources and in spite of mistakes, shortsightedness, greed, and ruthless disregard for the future. Recognition of these errors, however, led to the establishment of the Department of Agriculture and to the introduction of agricultural education and experiment stations which provide a basis for sounder progress in the future.

In this book Shannon has made a valuable contribution to the industrial history of the United States. The publication of the volume at this time is particularly opportune as a warning, since the United States is not only entering a new phase of its own agricultural history but is also sharing the responsibility for the rehabilitation of agriculture in other parts of the world. It is probable that specialists will take exception to some aspects of the book—chiefly omissions. Climatologists will feel that the role of climate has been underestimated, easterns may feel that their part of the country has not received due consideration, agronomists may find the chapter on mechanization inadequate, soil conservationists will discover little concerning the beginnings of soil erosion although these were evident in various parts of the country before 1900, and those who are areally minded will regret the total absence of maps.

Criticisms on the basis of omission, however, are scarcely justifiable since no single volume could possibly satisfy the needs of all specialists. In the preface the author gives his purpose: "I have tried to view the scene as the farmer saw it and picture the farmer himself as he was affected and was influenced by the world in which he worked and lived." This purpose has been admirably accomplished.

—Lois Olson

PIONEER SETTLEMENT IN THE ASIATIC TROPICS—Studies in Land Utilization and Agricultural Colonization in Southeastern Asia. By *KARL J. PELZER*. American Geographic Society. New York. 288 pages.

NOW THE WAR is over man's energy and ingenuity can be directed toward attaining the Four Freedoms. For the vast majority of the people Freedom From Want assumes primary importance in many parts of the world. In the Asiatic Tropics, want resulting from over-population is rampant, although much good land remains unsettled.

Pressure of population upon the land was recognized as a serious problem before the war, and a few forthright endeavors were made to solve it. The enterprising Dutch spent large sums to relieve congestion in Java, and the Filipinos, with the assistance of the United States, made some progress in population redistribution in the Philippines.

Pelzer's book presents an analysis of the many perplexing problems encountered in these undertakings and gives a summary of guiding principles for successful settlement. This study is particularly timely, for land settlement is one of the most puzzling problems that will confront Acting Governor General Van Mook and High Commissioner McNutt in rehabilitating the Netherlands Indies and the Philippines. The book can be invaluable in improving settlement techniques throughout the world.

Land use and occupancy in these two archipelagos are outlined as well as the transition from primitive to advanced agriculture and the land use problems of shifting and sedentary cultivators. This furnishes the background for the second part of the book, which chiefly deals with recent settlement on Mindanao and the Outer Islands. Excellent pictures supplement the text. Supplementary information is found in an appendix.

Among the suggested requisites for good settlement are: (1) development and maintenance of enthusiastic public support, (2) careful study of soils, climate, irrigation, drainage, suitable crops, proper farm practices, necessary soil-conservation methods, and the land rights and requirements of indigenous peoples, (3) adequate health facilities and protection, (4) scientific settler selection ("ten commandments" for successful selection are outlined), (5) adequate financial backing, (6) economic-sized farm units, (7) settler cooperatives, (8) compact rather than scattered settlement, (9) free exchange of ideas and information, and (10) realization that settlement will not cure all economic and social ills.

New factors must be utilized fully, as DDT to control insect pests and the heavy war-related equipment available in the area for clearing, leveling, irrigation, and drainage. Above all there is the United Nations' Food and Agriculture Organization with its great potentialities.

Pelzer's concluding remarks are: "A pooling of scientific manpower, as well as of experience, will therefore be beneficial, if not essential, to the whole of Southeastern Asia. Such a pooling could probably be best effected by an international agency, which might take the form of a broadly representative regional council."

—*Marshall Harris*

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UNO Assembly

Those who thought that we would perform miracles are disappointed, but those who understand the economic and political problems left by war will be satisfied.

—PAUL-HENRI SPAAK